

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the present amendment and in light of the following discussion, is respectfully requested.

Claims 1-15 are pending in the present application. In the present amendment, Claims 1-9 are currently amended and new Claims 10-15 are added. Support for the present amendment can be found in the original specification, for example, at page 3, line 29 to page 4, line 28, at page 6, lines 21-30, at page 7, line 27 to page 8, line 25, in Figures 1 and 2, and in original Claims 1-9. Thus, it is respectfully submitted that no new matter is added.

In the outstanding Office Action, the specification was objected to; Claims 8 and 9 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 3-5, and 7-9 were rejected under 35 U.S.C. § 102(b) as anticipated by Sato (U.S. Patent No. 6,0294,107); Claim 2 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sato in view of Minowa et al. (U.S. Publication No. 2002/0095255, hereinafter “Minowa”); and Claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sato in view of Kawano et al. (U.S. Patent No. 5,129,475, hereinafter “Kawano”).

The specification is hereby amended to add section headings where appropriate. It is respectfully submitted that no new matter is added. Thus, it is respectfully requested that the objection to the specification be withdrawn.

In response to the rejection of Claims 8 and 9 under 35 U.S.C. § 112, second paragraph, it is noted that Claim 8 no longer recites “means for” language, and thus should not be interpreted under 35 U.S.C. § 112, sixth paragraph. Accordingly, it is respectfully requested that the rejection of Claim 8, and Claim 9 which depends thereon, under 35 U.S.C. § 112, second paragraph, be withdrawn.

In response to the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), Applicant respectfully requests reconsideration of these rejections and traverses these rejections, as discussed below.

Amended Claim 1 recites, in part, a method for control of an automatic transmission, comprising detecting a downhill-travel situation of the vehicle. Further, the method includes choosing a transmission ratio such that the engine absorbs energy, comprising instructing the transmission to initiate downshifting if the current speed of the vehicle exceeds the speed at the beginning of the downhill-travel situation by a predetermined deviation. However, when a brake is detected as being applied via a brake pedal, the downhill-travel situation is not detected. Thus, as explained in the original specification, for example, at page 3, lines 6-13, when the driver is pressing the brake pedal, the driver's intent is to slow or stop the vehicle so the downhill-travel situation is not detected. It is respectfully submitted that the cited references do not disclose or suggest every feature recited in amended Claim 1.

Sato describes a control method for an automatic transmission that automatically controls the gear ratio according to a road condition.¹ Specifically, Sato describes controlling a continuously variable transmission by determining a road gradient and then determining a target engine rpm based on the determined gradient.² Next, Sato describes determining a target gear ratio based on the target engine rpm and adjusting the current gear ratio to the target gear ratio.³

However, it is respectfully submitted that Sato does not disclose or suggest “detecting whether a brake is applied via a brake pedal and, when the brake is applied, the downhill-travel situation is not detected,” as recited in amended Claim 1.

¹ See Sato, at column 1, lines 42-49.

² See Sato, at column 11, lines 40-60.

³ See Sato, at column 11, lines 61-65.

Instead, Sato describes automatically adjusting the gear ratio when the engine speed does not meet the target speed. Thus, Sato is silent regarding not adjusting the gear ratio when a driver applies the brakes.

Therefore, it is respectfully submitted that Sato does not disclose or suggest every feature recited in amended Claim 1. Thus, it is respectfully requested that the rejection of Claim 1, and all claims dependent thereon, as anticipated by Sato be withdrawn.

Regarding Claim 3, it is noted that Claim 3 depends on Claim 1, and thus is believed to be patentable for at least the reasons discussed above with respect to Claim 1. Further, Claim 3 recites, in part, “verifying that, before the downshifting is initiated, an energy-absorption capacity of the engine is smaller than a predetermined power threshold.”

As Sato describes adjusting a gear ratio of a continuously variable transmission, Sato is silent regarding determining whether an energy-absorption capacity of the engine is smaller than a predetermined power threshold before the downshifting is initiated. On the contrary, as discussed above, Sato describes automatically adjusting the gear ratio when the engine speed does not meet the target speed. Accordingly, it is respectfully submitted that Claim 3, and all claims dependent thereon, patentably define over Sato.

Independent Claim 8 recites, in part, a system for control of an automatic transmission comprising an electronic unit configured to “identify a downhill-travel situation of the vehicle” and to “instruct the transmission to initiate downshifting if the current speed exceeds the speed at the beginning of downhill travel by a predetermined deviation.” Further, Claim 8 recites that “the electronic unit does not identify the downhill-travel situation if a brake is applied via a brake pedal.” Accordingly, it is respectfully submitted that Claim 8 patentably defines over Sato for at least the reasons discussed above with respect to Claim 1. Thus, it is respectfully requested that the rejection of Claim 8, and Claim 9 which depends thereon, as unpatentable over Sato be withdrawn.

Regarding the rejection of Claim 2 as unpatentable over Sato in view of Minowa, it is noted that Claim 2 depends on Claim 1, and thus is believed to be patentable for at least the reasons discussed above with respect to Claim 1.

Minowa describes a method of controlling traveling of a vehicle.⁴ Specifically, the method described by Minowa includes changing speed of the vehicle by brake control and controlling engine torque and speed change ratio.⁵ However, although Minowa states that better acceleration and deceleration control can be executed by controlling of the engine torque and speed change ratio,⁶ Minowa does not describe that the engine torque and speed change ratio are *not* controlled when a driver depresses the brake pedal. Thus, it is respectfully submitted that Minowa does not cure the above-noted deficiencies of Sato.

Accordingly, it is respectfully submitted that Claim 2 is patentable over Sato in view of Minowa. Thus, it is respectfully requested that the rejection of Claim 2 be withdrawn.

Regarding the rejection of Claim 6 as unpatentable over Sato in view of Kawano, it is noted that Claim 6 depends on Claim 1, and thus is believed to be patentable for at least the reasons discussed above with respect to Claim 1. Further, it is respectfully submitted that Kawano does not cure any of the above-noted deficiencies of Sato. Accordingly, it is respectfully submitted that Claim 6 is patentable over Sato in view of Kawano. Thus, it is respectfully requested that the rejection of Claim 6 be withdrawn.

New Claims 10-15 are added by the present amendment. Support for new Claims 10-15 can be found in the original specification, for example, at page 3, line 29 to page 4, line 28, at page 6, lines 21-30, at page 7, line 27 to page 8, line 25, in Figures 1 and 2, and in original Claim 2-5. Thus, it is respectfully submitted that no new matter is added. Further, it is noted that Claim 10 depends on Claim 1 and that Claims 11-15 depend on Claim 8.

⁴ See Minowa, at paragraph [0001].

⁵ See Minowa, at paragraph [0033].

⁶ See Minowa, at paragraph [0033].

Accordingly, new Claims 10-15 are believed to be patentable for at least the reasons discussed above with respect to Claims 1 and 8.

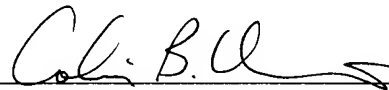
Additionally, new Claim 10 recites, in part that “the downhill-travel situation is not detected if an accelerator pedal is depressed such that a power demand of the engine is larger than a predetermined power threshold.” Applicant respectfully submits that the cited references do not describe not changing a transmission ratio if the driver of the vehicle is depressing the accelerator pedal. Accordingly, Applicant respectfully submits that Claim 10 further patentably defines over the cited references.

Claim 11 recites features similar to those discussed above with respect to Claim 3 and Claim 15 recites features similar to those discussed above with respect to Claim 10. Thus, Applicant respectfully submits that Claim 11, Claims 12-14 which depend on Claim 11, and Claim 15 further patentably define over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding and the present application is believed to be in condition for formal allowance. A Notice of Allowance is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Philippe J.C. Signore, Ph.D.
Attorney of Record
Registration No. 43,922

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

Colin B. Harris
Registration No. 58,969